

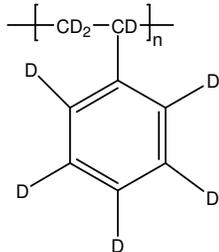
**Sample Name: Deuterated Polystyrene (d<sub>8</sub>)**

**SEC elugram of Homopolymer:**

**Sample #: P3595F4-dPS**

**P3595F4-dPS**

**Structure:**

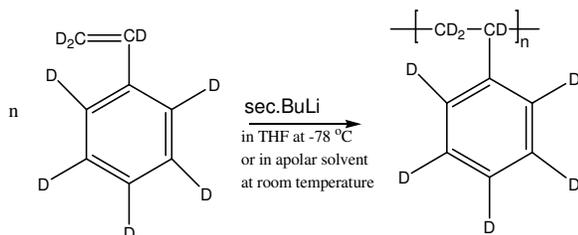


**Composition:**

| $M_n \times 10^3$ | PDI |
|-------------------|-----|
| 2000.0            | 1.5 |

**Synthesis Procedure:**

Deuterated polystyrene-d<sub>8</sub> is obtained by living anionic polymerization of styrene-d<sub>8</sub> as illustrated below:

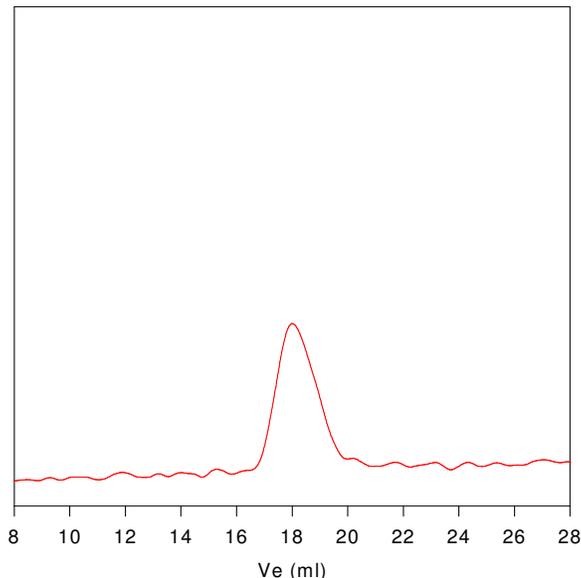


**Characterization:**

The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography (SEC) in THF. SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors from Viscotek Co. Three SEC columns from Supelco (G6000-4000-2000 HXL) were used.

**Solubility:**

Deuterated polystyrene-d<sub>8</sub> is soluble in DMF, THF, toluene and  $CHCl_3$ . It precipitates from methanol, ethanol, water and hexanes.



Size exclusion chromatograph of deuterated polystyrene:  
 $M_n=2000,000$ ,  $M_w=3000,000$   $PI=1.5$